

IN THE CLAIMS

Please amend the claims as follows:

Claim 1. (Original) A dispersion-compensating module for compensating cumulative dispersion and dispersion slope of a transmission optical fiber in a predetermined signal wavelength band including at least 1530 to 1625 nanometers, comprising:

a first dispersion-compensating fiber having a negative first dispersion value and a negative first dispersion slope;

a second dispersion-compensating fiber having a negative second dispersion value and a negative second dispersion slope, the second dispersion value and the second dispersion slope being different from the first dispersion value and the dispersion slope respectively; and

a jointing unit that serially joints the first dispersion-compensating fiber with the second dispersion-compensating fiber, wherein

the first dispersion slope changes along an upwardly convex curve as the wavelength changes, and the second dispersion slope changes along a downwardly convex curve as the wavelength changes.

Claim 2. (Original) The dispersion-compensating module according to claim 1, wherein the first dispersion-compensating fiber and the second dispersion-compensating fiber are wound around a bobbin.

Claim 3. (Original) The dispersion-compensating module according to claim 1, wherein

a dispersion-compensating fiber having a smaller bending loss in a maximum wavelength of the predetermined signal wavelength band is first wound around the bobbin.

Claim 4 (Currently Amended): The dispersion-compensating module according to claim 1, wherein

~~the first dispersion compensation fiber and the second dispersion compensation fiber are jointed to each other by fusion~~ the jointing unit is fusion-splicing.

Claim 5 (Currently Amended): The dispersion-compensating module according to claim 4, further comprising a protection unit around ~~the jointing unit~~ a fusion-spliced portion.

Claim 6.(Original) The dispersion-compensating module according to claim 5, wherein the protection unit includes ultraviolet cured resin.

Claim 7. (Original) The dispersion-compensating module according to claim 1, wherein

a dispersion value D_t [ps/nm/km] of the dispersion-compensating module at a center wavelength in the predetermined signal wavelength band satisfies an inequality of $D_t \leq -20$.

Claim 8.(Original) The dispersion-compensating module according to claim 1, wherein

at the center wavelength in the predetermined signal wavelength band, a ratio of a dispersion value D_t [ps/nm/km] to a dispersion slope S_t [ps/nm²/km], that is, D_t/S_t , of the dispersion-compensating module and a ratio of a dispersion value D_0 [ps/nm/km] to a dispersion slope S_0 [ps/nm²/km], that is, D_0/S_0 , of the transmission optical fiber satisfy an inequality of

$$0.9 \times (D_0/S_0) \leq D_t/S_t \leq 1.1 \times (D_0/S_0).$$

Claim 9. (Original) The dispersion-compensating module according to claim 1,
wherein

a ratio of the first dispersion value, D1, to the first dispersion slope, S1, and a ratio of
a dispersion value D0 [ps/nm/km] to a dispersion slope S0 [ps/nm²/km] of the transmission
optical fiber satisfy an inequality of

$$0.8 \times (D0/S0) \leq D1/S1 < D0/S0$$

and

a ratio of the second dispersion value, D2, to the second dispersion slope, S2, and the
ratio D0/S0 satisfy an inequality of

$$D0/S0 < D2/S2 \leq 1.2 \times (D0/S0).$$

Claims 10-11 (Canceled)

Claim 12. (Original) The dispersion-compensating module according to claim 1,
wherein

at least one of the first dispersion-compensating fiber and the second dispersion-
compensating fiber has a function to be equipped with Raman amplifier.

13. (Currently Amended) An optical transmission system comprising: ~~at least the~~
~~dispersion compensation module according to claim 1~~

a dispersion-compensating module for compensating cumulative dispersion and
dispersion slope of a transmission optical fiber in a predetermined signal wavelength band
including at least 1530 to 1625 nanometers, the dispersion-compensating module including

a first dispersion-compensating fiber having a negative first dispersion value and a negative first dispersion slope, wherein the first dispersion slope changes along an upwardly convex curve as the wavelength changes;

a second dispersion-compensating fiber having a negative second dispersion value and a negative second dispersion slope, the second dispersion value and the second dispersion slope being different from the first dispersion value and the dispersion slope respectively, wherein the second dispersion slope changes along a downwardly convex curve as the wavelength changes; and

a jointing unit that serially joints the first dispersion-compensating fiber with the second dispersion-compensating fiber.

Claim 14. (New) The optical transmission system according to claim 13, wherein an absolute value of the cumulative dispersion of the transmission optical fiber is equal to or less than 0.5 ps/nm/km at a center wavelength in a predetermined signal wavelength band, and

an absolute value of the dispersion slope of the transmission optical fiber is equal to or less than 0.01 ps/nm²/km at the center wavelength in the predetermined signal wavelength band.

Claim 15. (New) The optical transmission system according to claim 14, wherein an absolute value of the cumulative dispersion of the transmission optical fiber is equal to or less than 0.5 ps/nm/km in the predetermined signal wavelength band, and

an absolute value of the dispersion slope of the transmission optical fiber is equal to or less than 0.01 ps/nm²/km in the predetermined signal wavelength band.

IN THE DRAWINGS

The attached sheets of drawings include changes to Figs. 3, 7 and 12. This sheet, which includes Figs. 1-12, replaces the original sheet including Figs. 1-12.

Attachment: Replacement Sheets (12)